BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 70' BRIDGE

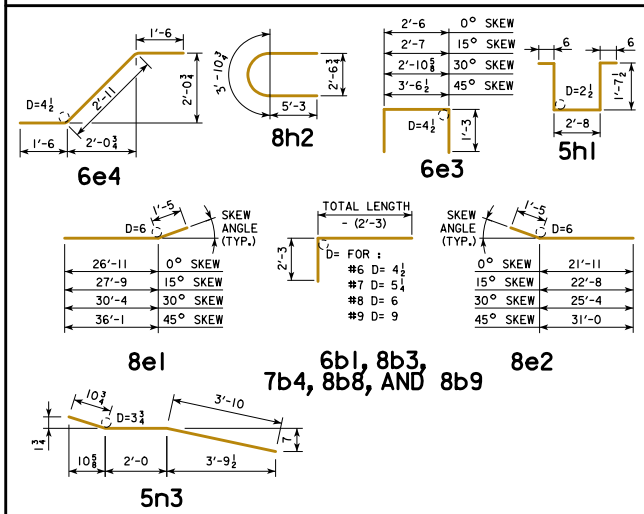
LOCATION \ SKEW	SHAPE	BAR	0° NO.	0° LENGTH	0° WEIGHT	15° NO.	15° LENGTH	15° WEIGHT	30° NO.	30° LENGTH	30° WEIGHT	45° NO.	45° LENGTH	45° WEIGHT
SLAB LONGITUDINAL BOTTOM		7a1	58	16'-0	1897	58	16'-0	1897	58	16'-0	1897	58	16'-0	1897
SLAB LONGITUDINAL BOTTOM		8a2	58	25'-0	3872	58	25'-0	3872	58	25'-0	3872	58	25'-0	3872
SLAB LONGITUDINAL BOTTOM		7a3	58	24'-3	2875	58	24'-3	2875	58	24'-3	2875	58	24'-3	2875
SLAB LONGITUDINAL BOTTOM		8a4	58	20'-9	3214	58	20'-9	3214	58	20'-9	3214	58	20'-9	3214
SLAB LONGITUDINAL BOTTOM		7a5	29	22'-0	1305	29	22'-0	1305	29	22'-0	1305	29	22'-0	1305
SLAB LONGITUDINAL BOTTOM, AT RAIL		7a6	8	24'-9	405	8	24'-9	405	8	24'-9	405	8	24'-9	405
SLAB LONGITUDINAL BOTTOM, AT RAIL		7a7	4	27'-4	224	4	27'-4	224	4	27'-4	224	4	27'-4	224
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a8	8	18'-3	390	8	18'-3	390	8	18'-3	390	8	18'-3	390
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a9	4	23'-6	251	4	23'-6	251	4	23'-6	251	4	23'-6	251
SLAB LONGITUDINAL TOP		6b1	58	9'-0	785	58	9'-0	785	58	9'-0	785	58	9'-0	785
SLAB LONGITUDINAL TOP		8b2	58	18'-3	2827	58	18'-3	2827	58	18'-3	2827	58	18'-3	2827
SLAB LONGITUDINAL TOP		8b3	58	27'-6	4259	58	27'-6	4259	58	27'-6	4259	58	27'-6	4259
SLAB LONGITUDINAL TOP		7b4	58	22'-3	2638	58	22'-3	2638	58	22'-3	2638	58	22'-3	2638
SLAB LONGITUDINAL TOP		8b5	58	12'-6	1936	58	12'-6	1936	58	12'-6	1936	58	12'-6	1936
SLAB LONGITUDINAL TOP		6b6	29	20'-4	886	29	20'-4	886	29	20'-4	886	29	20'-4	886
SLAB LONGITUDINAL TOP, AT RAIL		8b8	8	40'-0	855	8	40'-0	855	8	40'-0	855	8	40'-0	855
SLAB LONGITUDINAL TOP, AT RAIL		8b9	8	30'-0	641	8	30'-0	641	8	30'-0	641	8	30'-0	641
SLAB TRANSVERSE BOTTOM		6c1	67	25'-5	2558	67	26'-4	2650	56	25'-5	2138	46	25'-5	1757
SLAB TRANSVERSE BOTTOM		6c2	67	23'-3	2340	67	24'-1	2424	58	23'-3	2026	49	23'-3	1712
SLAB TRANSVERSE ENDS, BOTTOM		6c3	-	-	-	-	-	-	14	VARIES	303	22	VARIES	485
SLAB TRANSVERSE ENDS, BOTTOM		6c4	-	-	-	-	-	-	12	VARIES	255	22	VARIES	458
SLAB TRANSVERSE ENDS, BOTTOM		6c5	-	-	-	-	-	-	12	VARIES	208	20	VARIES	366
SLAB TRANSVERSE ENDS, BOTTOM		6c6	-	-	-	-	-	-	12	VARIES	227	19	VARIES	376
SLAB TRANSVERSE TOP		5d1	67	25'-9	1800	67	26'-8	1864	56	25'-9	1505	46	25'-9	1236
SLAB TRANSVERSE TOP		5d2	67	23'-3	1625	67	24'-1	1683	58	23'-3	1407	49	23'-3	1189
SLAB TRANSVERSE ENDS, TOP		5d3	-	-	-	-	-	-	14	VARIES	210	22	VARIES	337
SLAB TRANSVERSE ENDS, TOP		5d4	-	-	-	-	-	-	12	VARIES	177	22	VARIES	318
SLAB TRANSVERSE ENDS, TOP		5d5	-	-	-	-	-	-	12	VARIES	144	20	VARIES	254
SLAB TRANSVERSE ENDS, TOP		5d6	-	-	-	-	-	-	12	VARIES	158	19	VARIES	261
SLAB, TRANSVERSE AT ABUTMENT		8e1	18	28'-4	1362	18	29'-2	1402	18	31'-9	1526	18	37'-6	1803
SLAB, TRANSVERSE AT ABUTMENT		8e2	18	23'-4	1122	18	24'-1	1158	18	26'-9	1286	18	32'-5	1558
SLAB, HAIRPINS, AT ABUTMENT		6e3	100	5'-0	751	100	5'-1	764	100	5'-5	814	100	6'-1	914
SLAB, DIAGONALS, AT ABUTMENT		6e4	100	5'-11	889	100	5'-11	889	100	5'-11	889	100	5'-11	889
PIER CAP HOOPS		5h1	72	6'-11	520	72	6'-11	520	90	6'-11	650	108	6'-11	780
PIER CAP ENDS		8h2	4	14'-5	154	4	14'-5	154	4	14'-5	154	4	14'-5	154
PIER CAP, BOTTOM LONGITUDINAL		8h3	8	27'-5	586	8	28'-8	613	8	31'-8	677	8	37'-10	809
PIER CAP, BOTTOM LONGITUDINAL		8h4	8	21'-11	469	8	22'-4	478	8	24'-6	524	8	29'-8	634
PIER CAP, TOP LONGITUDINAL		8h5	4	28'-2	301	4	29'-6	316	4	32'-8	349	4	38'-11	416
PIER CAP, TOP LONGITUDINAL		8h6	4	23'-5	251	4	23'-11	256	4	26'-3	281	4	31'-6	337
TOP OF SLAB, TRANSVERSE, AT RAIL		5j1	132	8'-6	1171	132	8'-6	1171	126	8'-6	1118	124	8'-6	1100
WING, VERTICAL		5m1	40	4'-5	185	40	4'-5	185	40	4'-5	185	40	4'-5	185
WING, HORIZONTAL BACK FACE		5n1	24	6'-8	167	24	6'-8	167	24	6'-8	167	24	6'-8	167
WING, HORIZONTAL TRAFFIC FACE		5n3	24	6'-9	169	24	6'-9	169	24	6'-9	169	24	6'-9	169
SUB EPOXY COATED TOTAL - LBS.					45,680			46,123			46,807			47,924
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-14					3220			3220			3220			3220
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-14					3266			3266			3266			3266
EPOXY COATED RAIL TOTAL - LBS. WITH MONOLITHIC PIER CAP		WITH BARRIER RAIL			48,900			49,343			50,027			51,144
		WITH OPEN RAIL			48,946			49,389			50,073			51,190
EPOXY COATED RAIL TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP		WITH BARRIER RAIL			46,619			47,006			47,392			48,014
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED		WITH OPEN RAIL			46,665			47,052			47,438			48,060
STAINLESS STEEL RAIL TOTAL - LBS.		WITH BARRIER RAIL			1737			1737			1737			1737
		WITH OPEN RAIL			1834			1834			1834			1834

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 70' BRIDGE

ITEM		SKEW	WITH MONOLITHIC PIER CAP 0°	15°	30°	45°	WITH NON-MONOLITHIC PIER CAP 0°	15°	30°	45°
WITH BARRIER RAIL	* STRUCTURAL CONCRETE (BRIDGE)	C.Y.	183.4	184.5	188.4	196.8	177.0	177.9	181.1	187.9
	REINF. STEEL EPOXY COATED	LBS.	48,900	49,343	50,027	51,144	46,619	47,006	47,392	48,014
	Δ REINF. STEEL STAINLESS STEEL	LBS.	1982	1982	1982	1982	1982	1982	1982	1982
CONCRETE BARRIER OR OPEN RAIL		LIN. FT.	162.0	162.2	162.9	164.5	162.0	162.2	162.9	164.5
WITH OPEN RAIL	* STRUCTURAL CONCRETE (BRIDGE)	C.Y.	183.3	184.4	188.3	196.7	176.9	177.8	180.9	187.8
	REINF. STEEL EPOXY COATED	LBS.	48,946	49,389	50,073	51,190	46,665	47,052	47,438	48,060
	Δ REINF. STEEL STAINLESS STEEL	LBS.	2079	2079	2079	2079	2079	2079	2079	2079

* INCLUDES 4 WINGS @ 0.68 C.Y. EACH; EXCLUDES RAIL CONCRETE.
Δ INCLUDES ABUTMENT PAVING NOTCH BAR WEIGHT.

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER.

STAINLESS STEEL REINFORCING FOR SUPERSTRUCTURE - BRIDGE

LOCATION \ ALL SKEWS	SHAPE	BAR	NO.	LENGTH	WEIGHT
ABUTMENT PAVING NOTCH BAR		8u1	44	2'-1	245

8u1 BARS SHALL BE PAID FOR UNDER THE BID ITEM "REINFORCING STEEL, STAINLESS STEEL". WEIGHT = LBS.

NOTES:
ALL BARRIER RAIL REINFORCING STEEL IS TO BE EITHER EPOXY COATED OR STAINLESS STEEL AS SHOWN OR NOTED. THE STAINLESS STEEL REINFORCING STEEL SHALL BE DEFORMED BAR GRADE 60 MEETING THE REQUIREMENTS OF MATERIALS I.M.452.

ALL OTHER REINFORCING STEEL IS TO BE EPOXY COATED.

THE TRANSVERSE REBARS ARE DETAILED WITH A SPLICE LAP. AT THE CONTRACTOR'S OPTION, THIS LAP MAY BE ELIMINATED BY FURNISHING FULL LENGTH BARS WITH NO REDUCTION IN PAY WEIGHT FOR SAME.

04-2016
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

IOWADOT Highway Division

STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES
CONTINUOUS CONCRETE SLAB BRIDGES
JULY, 2014

SUPERSTRUCTURE DETAILS 70'-0 BRIDGE

J44-03-14

REVISED 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J44-14 STANDARDS INSTEAD OF J44-06 STANDARDS.
REVISED 03-2016 - REVISION FOR ADDITION OF PAVING NOTCH BAR 8u1.
REVISED 04-2016 - REVISION TO INCLUDE PAVING NOTCH BAR 8u1 WEIGHT IN ESTIMATED QUANTITIES TABLE.